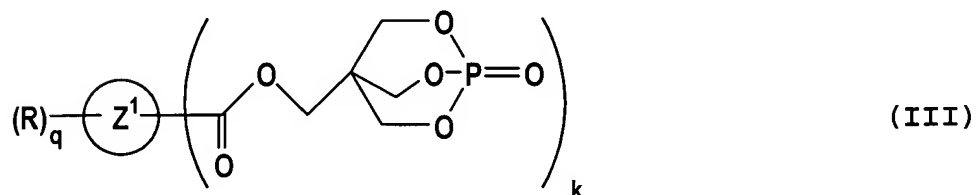
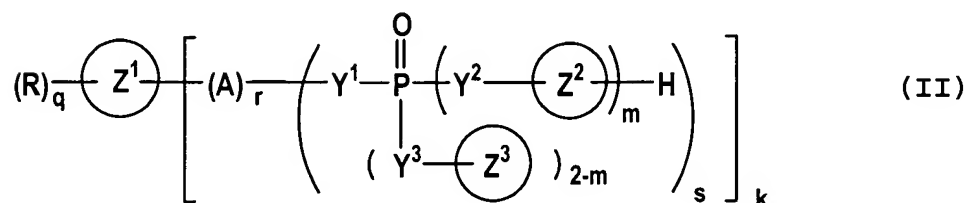
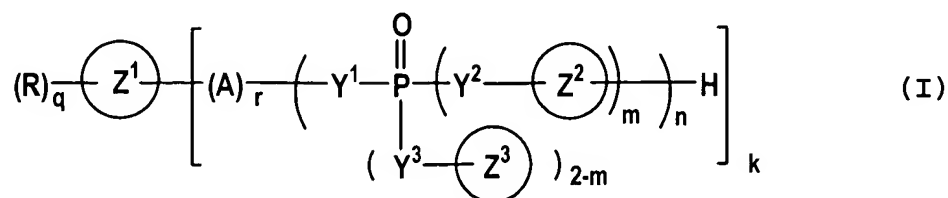


AMENDMENTS TO THE CLAIMS

1. (currently amended) A phosphorus-containing compound represented by the following formula (I), (II) or (III):



wherein  $Z^1$ ,  $Z^2$  and  $Z^3$  are the same or different, each representing a cycloalkane ring, a cycloalkene ring, a polycyclic aliphatic hydrocarbon ring or an aromatic hydrocarbon ring, in which these rings may have a substituent; R represents a halogen atom, a hydroxyl group, a carboxyl group, a halocarboxyl group, an alkyl group, an alkoxy group, an alkenyl group or an aryl group; A represents a polyvalent group corresponding to an alkane;  $Y^1$ ,  $Y^2$  and  $Y^3$  are the same or different, each representing -O-, -S- or -NR<sup>1</sup>-

wherein  $R^1$  represents a hydrogen atom or an alkyl group; k represents an integer of 1 to 6; m represents an integer of 0 to 2; n represents an integer of not less than 1; q represents an integer of 0 to 5; r represents 0 or 1; s represents an integer of 1 to 4; and

provided that when  $Z^1$  is a cyclohexane ring, q is 0, and k is 1, factor r for A is 1; when  $Z^1$  is a cyclohexane ring, q is 0, and k is 2 to 6, at least one of plural factors r for A is 1; and when  $Z^1$  is a benzene ring and k is 1, the factor r for A is 1; when  $Z^1$  is a benzene ring and k is 2 to 6, at least one of plural factors r for A is 1; and bis((1-oxo-2,6,7-trioxa-1-phosphabicyclo[2.2.2]-oct-4-yl)methyl) 2,5-dibromoterephthalate, 1,4-cyclohexanedimethanol bis(diaryl phosphate), (1-oxo-2,6,7-trioxa-1-phosphabicyclo[2.2.2]-oct-4-yl)methyl benzoate, (1-oxo-2,6,7-trioxa-1-phosphabicyclo[2.2.2]-oct-4-yl)methyl cyclohexanecarboxylate, tris(tricyclo[5.2.1.0<sup>2,6</sup>]decane) phosphate, 2-carboxy-3-diphenylphosphoroxynorbornane, and 3-diphenylphosphoroxynorbornane are excluded.

2. (original) A phosphorus-containing compound according to claim 1, wherein the rings  $Z^1$ ,  $Z^2$  and  $Z^3$  each is a dicyclic or tricyclic aliphatic hydrocarbon ring.

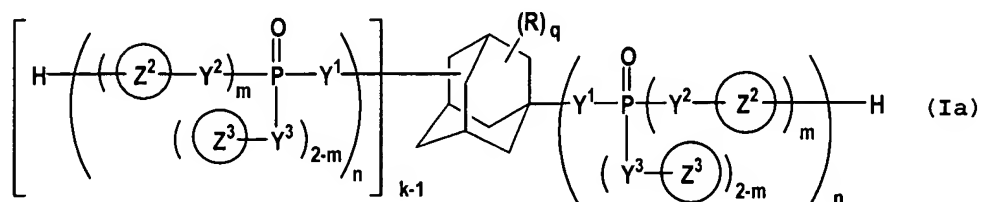
3. (original) A phosphorus-containing compound according to claim 1, wherein the ring  $Z^1$  is a norbornane ring, an adamantane ring, a tricyclo[5.2.1.0<sup>2,6</sup>]decane ring, or a benzene ring, and the rings  $Z^2$  and  $Z^3$  each is an adamantane ring or a benzene ring.

4. (original) A phosphorus-containing compound according to claim 1, wherein R is a halogen atom, a hydroxyl group, a C<sub>1-4</sub>alkyl group, or a C<sub>1-4</sub>alkoxy group in the formula (I).

5. (original) A phosphorus-containing compound according to claim 1, wherein each  $Y^1$ ,  $Y^2$  and  $Y^3$  represents -O-.

6. (original) A phosphorus-containing compound according to claim 1, wherein k is an integer of 1 or 2, n is 1, and q is an integer of 0 to 2.

7. (original) A phosphorus-containing compound according to claim 1, wherein a phosphorus-containing compound of the formula (I) is represented by the following formula (Ia):



wherein the  $\text{Z}^2$ ,  $\text{Z}^3$ , R,  $\text{Y}^1$ ,  $\text{Y}^2$ ,  $\text{Y}^3$ , k, m, n and q have the same meanings as defined above.

8. (original) A phosphorus-containing compound according to claim 7, wherein, in the formula (Ia),  $\text{Z}^2$  and  $\text{Z}^3$  are the same or different, each representing a benzene ring or an adamantane ring in which these rings may have a substituent; R is a halogen atom, a hydroxyl group, a  $\text{C}_{1-6}$  alkyl group, or a  $\text{C}_{1-6}$  alkoxy group;  $\text{Y}^1$ ,  $\text{Y}^2$  and  $\text{Y}^3$  each is -O- or  $-\text{NR}^1-$  (wherein  $\text{R}^1$  represents a hydrogen atom or a  $\text{C}_{1-4}$ alkyl group)); k is an integer of 2 to 4; n is an integer of 1 to 3; and q is an integer of 0 to 4.

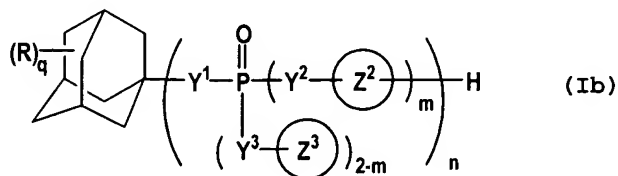
9. (original) A phosphorus-containing compound according to claim 7, wherein, in the formula (Ia),  $\text{Z}^2$  and  $\text{Z}^3$  are the same or different, each representing a benzene ring which may have a

substituent; R is a C<sub>1-4</sub>alkyl group; n is 1; and q is an integer of 0 to 2.

10. (original) A phosphorus-containing compound according to claim 7, wherein a compound represented by the formula (Ia) is an adamantyl bis, tris or tetrakis-(di C<sub>6-10</sub> aryl phosphate) or an adamantylbis, tris or tetrakis(di C<sub>6-10</sub> aryl phosphoramidate).

11. (original) A phosphorus-containing compound according to claim 7, wherein a compound represented by the formula (Ia) is adamantylbis(diphenylphosphate), dimethyladamantyl bis(diphenylphosphate), or adamantyltris(diphenyl phosphate).

12. (original) A phosphorus-containing compound according to claim 1, wherein a compound of the formula (I) is represented by the following formula (Ib):



wherein the Z<sup>2</sup>, Z<sup>3</sup>, R, Y<sup>1</sup>, Y<sup>2</sup>, Y<sup>3</sup>, m, n and q have the same meanings as defined above.

13. (original) A phosphorus-containing compound according to claim 12, wherein, in the formula (Ib),  $Z^2$  and  $Z^3$  are the same or different, each representing a benzene ring or an adamantane ring in which these rings may have a substituent; R is a halogen atom, a hydroxyl group, a  $C_{1-6}$  alkyl group, or a  $C_{1-6}$  alkoxy group;  $Y^1$ ,  $Y^2$  and  $Y^3$  are the same or different, each representing -O- or -NR<sup>1</sup>- wherein R<sup>1</sup> represents a hydrogen atom or a  $C_{1-4}$  alkyl group; and q is an integer of 0 to 4.

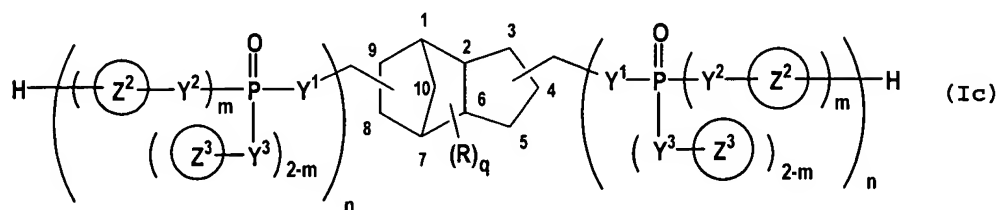
14. (original) A phosphorus-containing compound according to claim 12, wherein, in the formula (Ib), R is a hydroxyl group, a  $C_{1-4}$  alkyl group, or a  $C_{1-4}$  alkoxy group, and q is an integer of 0 to 2.

15. (original) A phosphorus-containing compound according to claim 12, wherein a compound represented by the formula (Ib) is an adamantyl di  $C_{6-10}$  arylphosphate or a diadamantyl  $C_{6-10}$  arylphosphate .

16. (original) A phosphorus-containing compound according to claim 12, wherein a compound represented by the formula (Ib) is

adamantyldiphenylphosphate, dimethyladamantyl diphenylphosphate, or bis(adamantyl)phenylphosphate.

17. (original) A phosphorus-containing compound according to claim 1, wherein a compound of the formula (I) is represented by the following formula (Ic):



wherein the  $Z^2$ ,  $Z^3$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $m$ ,  $n$  and  $q$  have the same meanings as defined above.

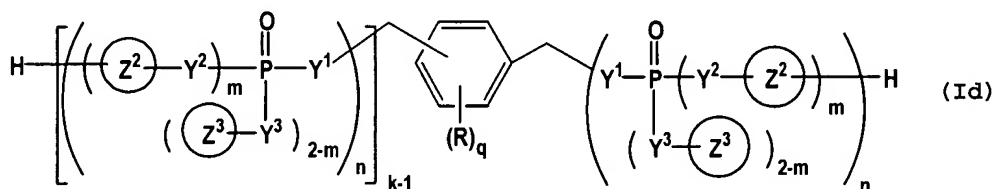
18. (original) A phosphorus-containing compound according to claim 17, wherein, in the formula (Ic),  $Z^2$  and  $Z^3$  each is a benzene ring which may have a substituent;  $R$  is a halogen atom, a hydroxyl group, a  $C_{1-6}$ alkyl group, or a  $C_{1-6}$  alkoxy group; and  $Y^1$ ,  $Y^2$  and  $Y^3$  are -O-.

19. (original) A phosphorus-containing compound according to claim 17, wherein a compound represented by the formula (Ic) is bis[(di  $C_{6-10}$  arylphosphoroxo) methyl]tricyclo [5.2.1.0<sup>2,6</sup>]decane.

20. (original) A phosphorus-containing compound according to claim 17, wherein a compound represented by the formula (Ic) is bis[(diphenylphosphoroxymethyl)tricyclo[5.2.1.0<sup>2,6</sup>]decane.

21. (original) A phosphorus-containing compound according to claim 17, wherein a compound represented by the formula (Ic) is (4R,8S)-bis(diphenylphosphoroxymethyl)-(1R,2S,6R,7R)-tricyclo[5.2.1.0<sup>2,6</sup>]decane.

22. (original) A phosphorus-containing compound according to claim 1, wherein a compound of the formula (I) is represented by the following formula (Id):



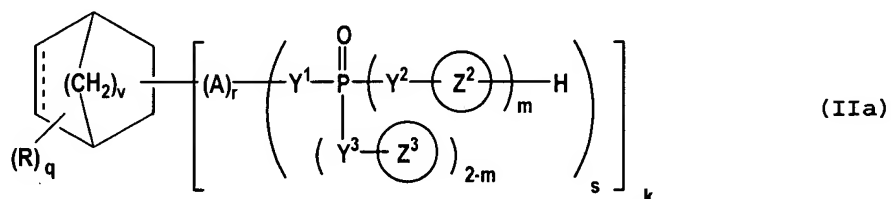
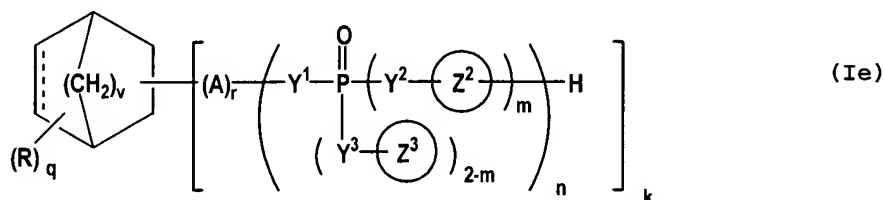
wherein the Z<sup>2</sup>, Z<sup>3</sup>, R, Y<sup>1</sup>, Y<sup>2</sup>, Y<sup>3</sup>, m, n and q have the same meanings as defined above.

23. (original) A phosphorus-containing compound according to claim 22, wherein, in the formula (Id), Z<sup>2</sup> and Z<sup>3</sup> each is a benzene ring which may have a substituent; and Y<sup>1</sup>, Y<sup>2</sup> and Y<sup>3</sup> are -O-.



24. (original) A phosphorus-containing compound according to claim 22, wherein a compound represented by the formula (Id) is xylyleneglycolbis(diphenylphosphate).

25. (original) A phosphorus-containing compound according to claim 1, wherein a compound of the formula (I) or (II) is represented by the following formula (Ie) or (IIa):



wherein the following structure

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means a single bond or a double bond,  $v$  is an integer of 0 to 2;  
and  $Z^2$ ,  $Z^3$ ,  $R$ ,  $A$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $m$ ,  $n$ ,  $q$ ,  $r$  and  $s$  have the same  
meanings as defined above.

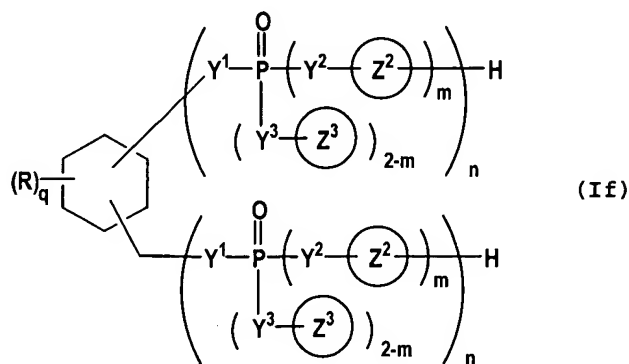
26. (original) A phosphorus-containing compound according to claim 25, wherein, in the formula (Ie) or (IIa),  $Z^2$  and  $Z^3$  each is a benzene ring which may have a substituent; R is a halogen atom, a hydroxyl group, a  $C_{1-6}$ alkyl group which may have a substituent, a  $C_{1-6}$  alkoxy group which may have a substituent, or an alkenyl group which may have a substituent; and  $Y^1$ ,  $Y^2$  and  $Y^3$  are -O-.

27. (original) A phosphorus-containing compound according to claim 25, wherein, in the formula (Ie), n is 1; q is an integer of 0 to 2; r is 1; and s is an integer of 1 to 2.

28. (original) A phosphorus-containing compound according to claim 25, wherein a compound represented by the formula (Ie) or (IIa) is bis(diphenylphosphoroxo)norbornane;  
bis(diphenylphosphoroxo  $C_{1-4}$  alkyl)norbornane;  
bis(diphenylphosphoroxo)-4- $C_{2-4}$  alkenylcyclohexane;  
(diphenylphosphoroxo  $C_{1-4}$  alkyl)cyclohexene; mono, di or tri- $C_{1-4}$ alkyl(diphenylphosphoroxo  $C_{1-4}$  alkyl)cyclohexyl phosphate; or  
bis(diphenylphosphoroxo)-[bis(diphenyl phosphoroxo) $C_{1-4}$ alkyl]cyclohexane.

29. (original) A phosphorus-containing compound according to claim 25, wherein a compound represented by the formula (Ie) or (IIa) is 2,3-bis(diphenylphosphoroxy)norbornane, 2,5-bis(diphenylphosphoroxymethyl)norbornane, 1,2-bis(diphenylphosphoroxy)-4-vinylcyclohexane, 1-diphenylphosphoroxymethyl-3-cyclohexene, 3,3,-dimethyl-5-(diphenylphosphoroxymethyl)cyclohexyl phosphate, or 1,2-bis(diphenylphosphoroxy)-4-[1',2'-bis(diphenylphosphoroxy)ethyl]cyclohexane.

30. (original) A phosphorus-containing compound according to claim 25, wherein a compound of the formula (Ie) is represented by the following formula (If):

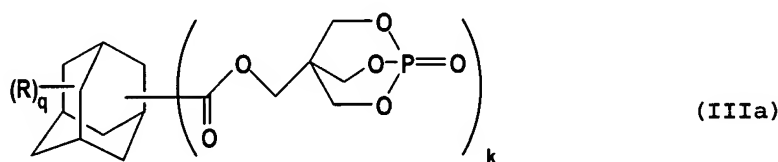


wherein  $Z^2$ ,  $Z^3$ ,  $R$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $m$ ,  $n$  and  $q$  have the same meanings as defined above.

31. (original) A phosphorus-containing compound according to claim 30, wherein, in the formula (If),  $Z^2$  and  $Z^3$  are the same or different, each representing a benzene ring; R is a halogen atom, a hydroxyl group, a  $C_{1-6}$ alkyl group, or a  $C_{1-6}$  alkoxy group; and  $Y^1$ ,  $Y^2$  and  $Y^3$  are the same or different, each representing -O- or  $-NR^1-$ .

32. (original) A phosphorus-containing compound according to claim 30, wherein a compound represented by the formula (If) is 1-diphenylphosphoroxo-3-diphenylphosphoroxo methylcyclohexane or 3,3,-dimethyl-5-(diphenyl phosphoroxymethyl)cyclohexylphosphate.

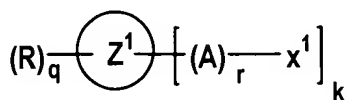
33. (original) A phosphorus-containing compound according to claim 1, wherein a compound of the formula (III) is represented by the following formula (IIIa):



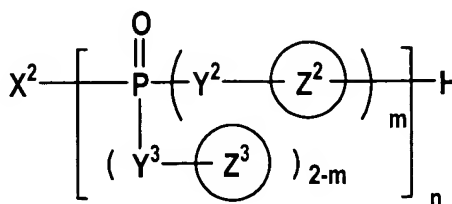
wherein R, q and k have the same meanings as defined above.

34. (original) A phosphorus-containing compound according to claim 33, wherein, in the formula (IIIa), R is a carboxyl group, a halocarboxyl group, or a  $C_{1-4}$ alkyl group.

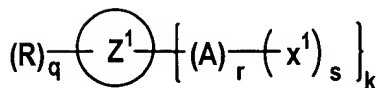
35. (original) A process for producing a phosphorus-containing compound represented by the formula (I), (II) or (III) recited in claim 1, which comprises reacting a compound represented by the following formula (I-1), (II-1) or (III-1) with a compound represented by the following formula (I-2), (II-2) or (III-2):



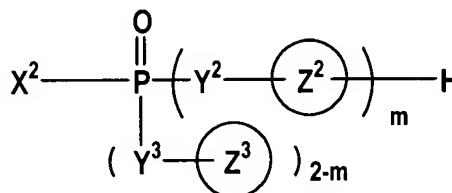
(I-1)



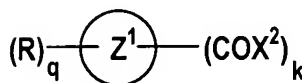
(I-2)



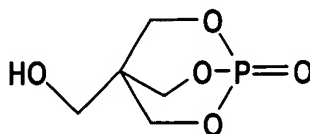
(II-1)



(II-2)



(III-1)



(III-2)

wherein  $X^1$  represents a hydroxyl group, a thiol group, an amino group, or a substituted amino group;  $X^2$  represents a halogen atom, a hydroxyl group, or an alkoxy group; and the  $Z^1$ ,  $Z^2$ ,  $R$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $k$ ,  $m$ ,  $q$ ,  $r$  and  $s$  have the same meanings as defined above.